

# F. Maxwell (Max) Harper

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## Summary

Senior scientist with a strong publication record and professional experience with recommender systems, applied machine learning, human-computer interaction, and data science.

## Education

**University of Minnesota, Minneapolis, MN** (2003 – 2009)

Ph.D., Computer Science

Advised by Dr. Joseph A. Konstan

**University of Minnesota, Minneapolis, MN** (2003 – 2006)

M.S., Computer Science

**Carleton College, Northfield, MN** (1994 – 1998)

B.A., International Relations and Environmental Studies

*Magna Cum Laude*

## Professional and Research Experience

**Amazon, Seattle, WA** (2019 – )

*Senior Applied Scientist.* Developing algorithms, models, and analysis to improve the quality and trustworthiness of a widely-used Amazon recommender system. Led a project to detect offensive language through problem definition, analysis, modeling, and launch; improved on the previous system from estimated F1 of 0.47 to 0.84. Currently developing techniques to identify and mitigate algorithmic bias, and conducting research in the areas of self-disclosure detection and interactive machine learning.

**University of Minnesota, Minneapolis, MN** (2012 – 2019)

*Research Scientist.* Led research projects at the GroupLens Center for Social and Human-Centered Computing in the areas of recommender systems and social computing. Managed the MovieLens code, community, and datasets (<https://movielens.org>). Mentored graduate and undergraduate students in research and software development. Taught “Developing the Interactive Web” (~50 students, 2 TAs) and a seminar on “Data Science Methods for Social Computing” (~10 students).

**Code 42 Software, Minneapolis, MN** (2011 – 2012)

*Software Engineer.* Built server-side software for CrashPlan, a product with hundreds of thousands of users and many dozens of petabytes of backup data. Contributed to many efforts, with a focus on scalability and automated test coverage.

**Theophilus, Inc., New York, NY** (50% time, 2009 – 2010)

*Consulting Data Scientist.* Built a recommendation engine for an online restaurant deal discovery application. Prototyped and evaluated experimental technologies for automated summarization and recommendation.

**Blue Shift Software Laboratory, Minneapolis, MN** (2009 – 2011)

*Founder, Lead Engineer.* Founded a startup business with the broad goal of providing software that supports data-driven decision-making through the synthesis and visualization of existing knowledge. Launched thinkmeter.com and eventburn.com, both hosted on Google App Engine.

**University of Minnesota, MN** (20% – 50% time, 2009 – 2010)

*Post-Doctoral Associate.* Coordinated research efforts between the GroupLens research group and researchers from the Department of Writing Studies. Developed machine learning techniques to infer

the intent of users of social software. Contributed to a funded NSF grant to extend the group's work on question and answer Web sites. Mentored graduate students.

**University of Minnesota, MN** (2004 – 2009)

*Research Assistant.* Led and participated in several research teams, with the overarching goal of learning and publishing about user behavior in online systems. Collaborated with computer scientists, economists, and psychologists. Conducted laboratory and field studies, collected and analyzed massive data sets, and developed novel algorithms.

**Nokia Research Center, Palo Alto, CA** (Summer 2007)

*Research Intern.* Built the software to drive a network of interactive touchscreen computers that recognize nearby users using Bluetooth signal processing. Investigated the impact on interpersonal relationships through observational analysis, surveys, and data mining.

**Early Career** (1998 – 2003)

*Software Engineer* for Fair Isaac (data mining for credit scoring algorithms), AT&T Wireless (data warehousing applications), and OneSecure (web application development). *Systems Administrator Consultant (20% time)* for the Walker Art Center (administration of new media art installations).

## Peer-Reviewed Publications

Co-author of more than 50 publications that have together been cited more than 7,000 times. Primary publication venues are computer science and human-computer interaction conferences, including RecSys and CHI. Full citation list: <https://scholar.google.com/citations?user=y9kaCjcAAAAJ&hl=en>

Primary research areas:

- recommender systems (applications and user-centric studies)
- intelligent user interfaces
- algorithmic transparency and fairness
- human-computer interaction (user behavior, online communities)

Primary research methods:

- offline and online experimentation
- quantitative data analysis
- applied machine learning
- user and crowdsourcing studies

## Professional Activities

Experienced reviewer and committee member, including:

- ACM Conference on Recommender Systems (RecSys): General Chair 2022, Senior Program Committee, 2019–present
- Amazon Machine Learning Conference (AMLC): Tutorials Chair, 2020–2021
- ACM Special Interest Group on Information Retrieval (SIGIR): Senior Program Committee, 2019–present
- ACM Transactions on Intelligent Interactive Systems (TIIS): Board of Distinguished Reviewers, 2017–present
- NSF Information & Intelligent Systems: Panelist, 2017